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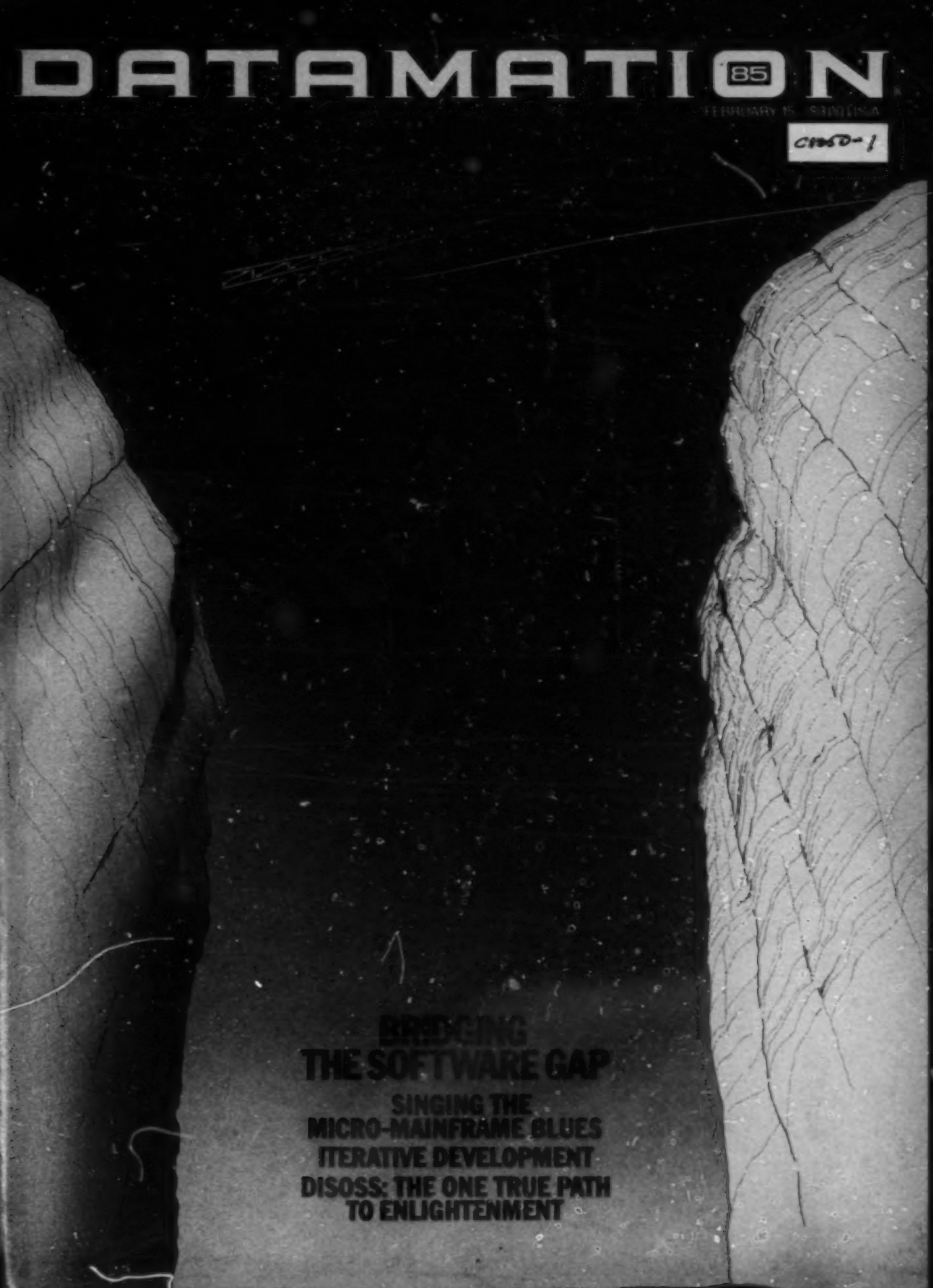

BRIDGING THE SOFTWARE GAP

SINGING THE MICRO-MAINFRAME BLUES

ITERATIVE DEVELOPMENT

DISOSS: THE ONE TRUE PATH TO ENLIGHTENMENT

DATAMATION

FEBRUARY 15, 1985/$3.00 U.S.A.
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COVER ILLUSTRATION BY ANDREA BARUFFI

Begging your pardon, sir, but there are several companies that say '85 isn't going anywhere.

"I just don't see it having an impact," says the MIB vice president of a New York investment house. "If repeal were going into effect on Dec. 31 and you have your board of directors' approval to purchase a system, you might make the buy on Dec. 31 to get the ITC. But I doubt very much anyone would rush a proposal to the board just to get the ITC. I'd rather get it right."

And Harold Baeverstadt, corporate director of information systems at Sundstrand Corp., Rockford, Ill., says, "We're not going to buy more mainframes anticipating repeal. We're going to make our decisions based on need. If we anticipate needing something in January or February, we might move it up to December" to use the ITC. "But we're not about to stock up," he adds.

"We still need equipment to get the job done," says Ed McConville, controller of the Consumer Foods Division at General Mills. "I'd still like to think we would move ahead with our acquisitions. But it probably means marginal acquisitions will be scrutinized more closely and some of them will not be made."

What probably will be made is more money, especially by lessors. Under the current ITC, a lessor has two choices. It can forego the ITC advantage by passing it through to the lessee, with the lessee having to pay for the gift in the form of higher lease rates. On the other hand, if the lessor chooses to take the ITC itself, that manifests itself in the lessee's lower rate and inability to take the ITC. With no ITC, it's not exactly clear what will happen here. Users will suffer, but lessors may not necessarily gain from that.

"There will be a decline in the leasing market," says Paul Oosterhuis, counsel for the CBEMA tax committee. "It's going to be significant. Stretching out the ACRS and repealing the ITC has to hurt the lessors."

Yet "the single biggest impact on prices will be the repeal of the ITC," says Frank Chatrier, executive vice president of financial services at CMI, a leasing company less dependent on ITC transactions than it used to be. Some of the company's leases use "income funds," a capital-raising technique almost entirely independent of the ITC.

"It's going to increase lease rates by 10%. What used to cost 92 cents will cost $1. There's going to be a permanent change in the pricing structure which will be detrimental to users. Budgets will be impacted, too. Everybody will be paying 10% more. The decision matrix for dp guys to acquire equipment will be much tougher."

One leasing company thinks the bonanza begins at home. "This would be a benefit for leasing companies and detrimental for users," contends Bob Snyder, vice president of Comdisco, Rosemont, Ill. "If they take away the ITC, we'll need a dramatic increase in lease rates to make up the yield. I think that will happen, because customers are still going to need equipment. Business will decrease only if there's a decrease in demand for computers. And that's not about to happen."

None of this may happen. Then again, all of it may happen. The whole affair probably depends on the President. If he pushes hard, the proposal lives. If he walks away, it dies.

"Reflexively, people's first reaction is that it can't pass," a knowledgeable House staffer says. "But maybe it can. I just don't know if these guys can vote against their own interests. I'm also not sure that voting to repeal the ITC is against their best interests. If they lose it and the ACRS here, they'll just go offshore. They'll get the credit in that country, then come back here and be taxed at 33% [the proposed corporate rate].

"If the whole package falls apart, all bets are off. Then we'll just go back to what we've been doing for the last three years—fighting like cats and dogs, cutting a little here and there."

So much for reform. ●

MAINFRAME LINKS

MICRO TO M'FRAME BLUES

Despite all the hoopla, most dp managers are still looking for an acceptable micro-to-mainframe link.

by Paula S. Stone

About micro-mainframe links
they'd read in the press.
Upon imp'mentation,
they'd found only a mess.

The trade press is glutted with products claiming to be the gateway to transporting dpers into a brave new world characterized by trouble-free and secure micro-to-mainframe connections. However, as Carleton Corp., Boston, put it aptly in its Christmas poem takeoff on Clement Moore's *A Visit from St. Nicholas*, the reality is not quite as pleasant as the promoters would have data processing managers believe.

ERDEI OF HUGHES is replacing the 3101 emulator with Relay because of its superior file transfer and switching capability.

While many companies are prepared to make the heavy investments in both dollars and time to implement a suitable micro-to-mainframe link, the currently offered packages lack polish, a wide variety of features, and a reasonable price, according to a new mail survey and a random telephone poll of DATAMATION readers. Now that the IBM PC and its plug compatibles are the mainstays in the offices of corporations around the world, the need to go beyond standalone units is paramount. And though linking these micros to mainframes is at the top of the list of dp managers' priorities, most are waiting patiently for the market to stabilize.

The experience of James Bird, director of information services of $5.6 billion General Mills Inc., Minneapolis, is a typical result of current conditions. "I've been wanting to make micro-to-mainframe investments for the last year," he says. "We've found that while there has been a lot of press and talk about micro-to-mainframe communications, there don't seem to be many people who are doing it successfully. My reaction was one of disappointment, particularly when you relate it to the number of products that seem to be available."

Bird's observation seems to illustrate the statistics of DATAMATION's 1984 survey on micro-to-mainframe links available as of December. Roughly a quarter, 27.1%, of the 642 respondents are currently using a micro-to-mainframe link; the highest concentration is in manufacturers of durable goods, 35.6%, and consumer goods, 29%.

NEWS IN PERSPECTIVE

The interest in advanced mainframe-based products has been less than enthusiastic: only 22% of the affirmative respondents are using products from the leading mainframe software suppliers. On-Line Software International Inc., Fort Lee, N.J., with 8.6% of the installations, and Cullinet Software, Westwood, Mass., and McCormack & Dodge, Natick, Mass., with 3.4% each, head the list. Most respondents are using terminal emulators, such as the Irma board products from Digital Communication Associates, Norcross, Ga.

Looking at the subset of dp centers for the Fortune 1,000 industrials and Fortune 400 financial and other services sectors, the percentage using micro-to-mainframe links increases sharply, to 43%, but the level of commitment to the big packages from the big vendors is almost identical with that of the overall population, 20.2%.

Such percentages were not surprising to officials at Cullinet and On-Line Software. Cullinet president Bob Goldman states that "while a lot has been said about micro-to-mainframe links, the products are just becoming available. Dp departments are beginning to set up their environments to use them."

Jack Berdy, president of On-Line Software, is more pragmatic. "The links are getting more attention and lip service than the number of people using them," he concedes. "Large companies with lots of micros are standing back and using study groups to analyze the data before making a commitment. Conflicts of interest and questions about security also slow the process. Smaller companies usually don't need it or don't know how to use the links yet. When they do they want to be able to move a file to a pc."

FIG.

PERCENTAGE OF MICRO-TO-MAINFRAME USERS
(BY VENDOR AND FIRM SIZE)

	ALL COMPANIES (174)	LARGE COMPANIES (114)
ADR	1.7	1.8
CINCOM	1.1	0
Cullinet	3.4	3.5
Informatics	.6	0
Information Builders	2.3	2.6
McCormack and Dodge	3.4	5.3
MSA	1.7	1.8
On-Line Software	8.6	7.9
Other	78.7	79.8

Berdy predicts "more implementation and commitment to a direction," i.e., product and/or product line, later this year or early in 1986. Berdy's optimism may be short lived, however, since dp managers frequently exhibit a conservative attitude toward complex network products. Frequent surveys over the years, for example, indicated that 20% of dp managers were interested in buying local area networks, yet the percentage actually using a LAN remains 10%.

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Typically, a cautious attitude translates to intermediary steps to satisfy current needs while waiting for the market to mature.

As Bird of General Mills explains, "We have looked at a wide range of communication packages and found the area to be a very confusing one. We think many products are being sold today that on the face will provide micro-to-mainframe communication. But, when we look at them, we find there are a lot of problems and deficiencies, whether in terms of integrity or functionality.

"It is a very dynamic area and at this time, apart from one or two products that tend to be very expensive, is not one that enjoys either a high reputation or a good track record," Bird concludes.

The General Mills short-term solution is Passport from Datalex Co., San Francisco, and Kermit, designed at Columbia University and sold by Kermit Distribution, New York. They are typical of what dp departments are looking for in terms of function. According to Bird, Passport is "reasonably priced," provides

Only 22% of the respondents are using micro-to-mainframe products from the leading mainframe software suppliers.

an "acceptable level of user friendliness," and transfers spreadsheet files from micro-to-micro or to a mainframe. Kermit offers more potential for flexibility than Passport, boasting macro programming and other capabilities, he adds.

Next to functionality, cost is another big factor for dpers. Some packages General Mills looked at were $40,000 for mainframe software and $1,000 for each micro. "When you are looking at 50 entities, that's a big investment, relatively speaking, in an environment that is still very young and developing," says Bird. "We recognize that and want to secure products that provide the basic level of functionality, but don't incur the level of investment that indicates we are going to be with the product for a long time. We don't think that is going to be the situation. We think there are going to be significant developments along this area in the next one to two years and we don't want to sink a lot of money into this area at this point."

Dpers also point to overambitious and inflated advertising as reasons for postponing purchases. A common complaint of dp managers contacted by DATAMATION is that many products just don't perform as suppliers claim. Early announcement of products or product enhancements lengthen the time before corporations will purchase. Dpers feel the products aren't fully tested before they are announced and the availability date is uncertain. If an MIS manager decides on a particular product and then the next version with enhancements is announced, he or she may wait until the enhanced version is available.

Approaches and experiences with suppliers vary considerably. On-line Software announced its Omni-Link micro-to-mainframe link in April 1983, to be delivered by December. The deadline was met.

On the other hand, Cullinet's Information Database (IDB), which was announced in January 1984, was scheduled to complete beta testing at the end of January this year. That didn't stop the company from mailing hundreds of demonstration disks to magazines months before beta testing was completed, or from selling about 150 copies in 1984 at $75,000 each. Goldengate, Cullinet's integrated pc package that can link to its IDB, was introduced in June, selling about 3,000 copies in 1984, claims Goldman.

Goldengate's reception is mixed.

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A prominent personal computer magazine raved about it in one issue, and two months later conceded it had significant flaws. Many dpers have not heard of it or thought it too expensive at $795 per unit for each pc—discounts up to 50% are available—in addition to the $75,000 for the mainframe software.

David Ferris, communications consultant and chairman of the San Francisco-based Ferrin Corp., says that "Cullinet has not understood the nature of the micro market right now. We do not recommend Goldengate, which was not developed by a central organization such as dp, but rather from an end-user pool.

"We have also examined some of the products and found them below par," continues Ferris. "We think Cullinet is a good company and you can expect some good things from them, but so far they have not developed an adequate strategy for handling the micro end of the market."

According to Ferris, simple file transfer is the most common application of micro-to-mainframe links. Dpers are also using micros as data entry devices, such as those sold by the Four-Phase subsidiary of Motorola based in Cupertino, Calif., and by Mohawk Data Sciences, Parsippany, N.J.; terminal emulation packages for asynchronous/synchronous communication; and some electronic mail.

For simple file transfer, the Hayes Smartmodem and Smartcom II software packages are the most popular. Other packages include BLAST from Communication Research Group, Baton Rouge, and Relay from New York-based VM Personal Computing.

Cray Research Inc., Mendota Heights, Minn., builder of large-scale scientific computers, uses BLAST to download programming code from a large number of pcs housed at a central location to remote sites. BLAST's error-checking capabilities are essential.

"Large companies with lots of micros are standing back and using study groups to analyze the data before making a commitment," concedes Berdy of On-Line Software.

"We've been using BLAST for about nine months," says senior program analyst John Badger, "and have never seen any bad data or bit. It also takes less time to transfer data than Crosstalk, the package BLAST replaced." BLAST for mainframes begins at $1,250. Each micro is $250 and discounts are available.

Half of the dpers contacted in a random telephone poll use VM Personal Computing's Relay/VM and Relay 3270, bundled together for $6,995, for file transfer between IBM mainframes and IBM Personal Computers and plug-compatibles. One new user is Hughes Aircraft Co., Long Beach, Calif., with about 1,000 pcs, which include "several hundred HPs, DECs, and others," according to Mike Erdei, associate director of systems development for the Communications and Data Processing department. Some of these are linked to the IBM 3084 using Forte boards or 3101 emulators. Forte was developed by Forte Data Systems Inc., Santa Clara.

Hughes is replacing the 3101 emulator with Relay because of Relay's superior file transfer capability and ease of switching between local pc and terminal session modes.

Stevan Pettit, a 20-year dp veteran and senior programmer analyst for Union Carbide in Charleston, W.Va., has been using Relay for one and a half years with IBM mainframes and the 1,000 plus personal computers located in the U.S. and Canada. The pcs include models from IBM, TI, Wang, Compaq, and Apple. Relay 3270 for pcs provides a high degree of functionality and ease of use, says Pettit.

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NEWS IN PERSPECTIVE

PETTIT OF UNION CARBIDE says there are lots of limitations using the 3270 boards, such as the on type and size of file transfer.

"Relay has lots of nice little features incorporated into it; the on-line help and vendor support are excellent," he continues. "Its full-screen simulator allows a user to dial the mainframe over a regular asynchronous line and operate as a 3270 terminal. We also support it so heavily because it is the only package that we know of that will allow a file transfer between our CMS system and the pc that will do binary file transfer with error checking."

Union Carbide also uses Forte, IRMA, and Tempus emulator boards in its pcs; it recently dropped the Tempus emulator board package from Micro Tempus Inc., Montreal, due to inadequate support. The Forte board is slightly faster than IRMA, reports Pettit, and there are lots of limitations using the 3270 boards, such as the type and size of files. It is working around this by using Relay and the boards together.

Harvey Shlasky, manager of the management consulting department for the Big Eight accounting firm Deloitte, Haskins & Sells, Los Angeles, claims his experience using Relay and BLAST has been "fair to middling with pretty much the same problems."

The problem in making the connection between micros and mainframes isn't just hardware and software. "One problem is that the users don't define their requirements properly. They just kind of throw in a product to try it out without doing a thorough requirements definition before they actually start the effort," Shlasky comments. "The result is that they are typically frustrated."

The suppliers have their work cut out for them, with many eyes watching them. Will they dance or get cold feet, dooming dp managers and their pc end users to terminal emulation forever? ●

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